

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

OMNI MEDSCI, INC.,
Patent Owner.

U.S. Patent No. 9,651,533

Case No.: IPR2019-00916

**PATENT OWNER'S SUR-REPLY TO PETITION
FOR *INTER PARTES* REVIEW UNDER 37 C.F.R. § 42.220**

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A. Introduction

Apple’s Reply rewrites the challenged claims, mischaracterizes the testimony of Omni MedSci’s expert, misconstrues the teachings of Lisogurski and Carlson, and improperly relies on obviousness arguments Apple did not make in its Petition. Separately and combined, Lisogurski and Carlson fail to disclose or render obvious “a light source *configured to increase signal-to-noise ratio* [“SNR”] . . . by increasing a pulse rate of at least one of the plurality of semiconductor sources.” (Ex. 1001 29:51-11.)^{1, 2}

In its Institution Decision (“ID”), the Board correctly determined that Lisogurski’s system varies an LED’s pulse rate but not to increase SNR. (Paper No. 16, ID at 31.) Apple’s response is, if a pulse rate increases, SNR may (or may not) increase and that hit-or-miss result is “configured to increase signal-to-noise ratio.” It is not.

Lisogurski discloses two forms of light source modulation, neither of which is configured to increase SNR by increasing a pulse rate as claimed. **First**, Lisogurski discloses “cardiac cycle modulation” which is “aligned with pulses of the

¹ Throughout this Sur-reply, all emphasis added unless otherwise noted.

² Omni MedSci’s focus on the “pulse rate” limitation is not an admission that the references disclose the other limitations of the challenged claims.

heart” or “other suitable physiological cyclical cycle.” (Ex. 1011 at 5:25-47.) This cardiac cycle modulation is “on the order of 1 Hz” correlating with an average heart rate of 60 beats per minute. (*Id.* at 6:28-29.) This is shown, for example, by blocks 532 and 534 in Fig. 5, which illustrate a red LED turning on and off in synchronization with the cardiac cycle (“PPG”). (*Id.* at 21:45-53.) Lisogurski explains that the “firing rate” of this cardiac cycle modulation can be adjusted *to track the cardiac cycle*. (*Id.* at 25:45-58; 28:30-39; 29:25-34.) But as the Board already determined, Lisogurski’s light source is not *configured to increase SNR* by increasing the pulse rate as claimed. (Paper No. 16, ID at 31.)

Second, Lisogurski also describes “a technique to remove ambient and background signals” by measuring ambient light while the LED is off and subtracting that measurement from the signals received with the light on. (*Id.* at 6:7-30.) Lisogurski says this can be done at an exemplary modulation rate of “1 kHz” using separate “drive cycle modulation.” (Ex. 1011 at 5:48-54; 6:30.) Apple ignores this section of Lisogurski and does not rely on it to show obviousness of the “pulse rate” limitation. Lisogurski does not disclose varying the frequency of the drive cycle modulation and does not disclose or render obvious increasing the pulse rate to increase SNR as claimed.

Apple adds Carlson purportedly to provide what is missing from Lisogurski. But Carlson adds nothing relevant to Lisogurski because the two references contain

identically the same teaching—right down to the same exemplary 1000 Hz modulation rate. (*Compare* Ex. 1011, Lisogurski, at 6:30 *with* Ex. 1009, Carlson, at [0069].) In fact, Carlson adds less than nothing because it merely modulates an unmodulated light source temporarily without varying the predetermined modulation frequency. An ordinary artisan reading Carlson would learn nothing new beyond what Lisogurski already discloses, which the Board correctly determined is *not* the claimed configuration. (Paper No. 16, ID at 30.)

Alone or combined, the references fail to disclose or render obvious “a light source configured to increase signal-to-noise ratio . . . by increasing a pulse rate of at least one of the plurality of semiconductor sources.” The Board should confirm the patentability of the challenged claims.

B. Apple rewrites the “pulse rate” limitation to remove the “configured to increase SNR” requirement

Apple argues that its references satisfy the claims merely because, if the pulse rate of the light source increases, the SNR may increase, too. (Reply at 1, 3-4.) To make that argument, Apple rewrites the “pulse rate” limitation. Apple wrongly asserts:

there is: (i) an action that the device must take (increasing the pulse rate of an LED) and (ii) a result of that action (an increased SNR).

(Reply at 6-7.)

Apple’s summary of the “pulse rate” limitation is wrong because it is backward. The claim requires a light source “configured to increase SNR,” not a light source “configured to increase a pulse rate.” So, when Apple says, “Lisogurski teaches a device that is *‘configured to’ take the action specified by the claim: increasing the pulse rate of an LED*” (Reply at 7), Apple distorts the claim. Apple has set up a strawman. It is irrelevant that Lisogurski discloses a device that varies a pulse rate because that is not the claimed configuration. As Apple aptly summarized, “[t]he Board preliminarily found that Lisogurski alone does not disclose increasing pulse rate *for the purpose of increasing SNR.*” (Reply at 7, n. 2, citing ID at 30.)³ Apple has not shown Lisogurski and Carlson—separately or together—are “configured to increase SNR” by “increasing a pulse rate.”

³ The Board found, and Apple does not dispute, that Lisogurski’s “LED firing rate is varied to become or remain synchronous with a cardiac cycle, not to increase signal-to-noise.” (Paper No. 16, ID at 30.) The Board also found, and Apple does not dispute, that “Lisogurski is teaching varying the sampling rate to be synchronous with the cardiac cycle, not to improve signal-to-noise.” (*Id.* at 31.)

Apple also asserts that Omni MedSci’s “configured to” construction injects an improper “intent” requirement. (Reply at 6-8.)⁴ But Omni MedSci’s construction is not based on “intent,” it is based on the express claim language: a “light source **configured to** increase signal-to-noise ratio” (Ex. 1001 29:51-11.) This express claim language is always relevant to the proper construction. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005).

Apple does not rebut Omni MedSci’s arguments or defend the Board’s substitution of “capable of” for the claims’ “configured to.” In its Response (pp. 10-11), Omni MedSci cited and discussed *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012) (“configured to” has a narrower meaning than “capable of”) and *Cook Grp. Inc. v. Boston Sci. Scimed, Inc.*, IPR2017-00132, Paper No. 71 at 17 (PTAB Nov. 14, 2018) (“the claim language ‘configured to’ requires structure designed to perform the function, not merely structure capable of

⁴ Apple also addresses, briefly, Omni MedSci’s criticism that the Board’s construction improperly broadens the “pulse rate” limitation to permit, *e.g.*, a human, and not the “light source,” to increase the pulse rate. (Reply at 6.) Apple asserts the Board’s construction is “irrelevant,” but does not defend it or rebut Omni MedSci’s arguments. (*Id.*)

performing the function.”).⁵ *Aspex Eyeware* is controlling Federal Circuit law. Apple does not address either decision in its Reply.

⁵ See also *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1380 (Fed. Cir. 2011) (distinguishing between a device configured to perform a certain function and a device that is simply capable of being configured to perform that function); *Centripetal Networks, Inc. v. Cisco Sys., Inc.*, No. 2:18-CV-94, 2020 WL 863976, at *7 (E.D. Va. Feb. 20, 2020) (“plain and ordinary meaning” of “configured to” “requires that the device be actually configured to do the function”); *Perdiem Co, LLC v. IndusTrack LLC*, No. 2:15-CV-727-JRG-RSP, 2016 WL 3633627, at *41 (E.D. Tex. July 7, 2016) (“[N]one of the general-usage dictionaries consulted by the Court defines ‘configure’ as to render merely ‘capable of.’”); *SwimWays Corp. v. Zuru, LLC*, No. 2:13CV334, 2014 WL 934447, at *11 (E.D. Va. Mar. 10, 2014) (“a construction that an appendage is merely ‘capable’ of propelling a figure through a liquid fails to adequately convey that the appendage is actually ‘configured to’ propel the figure through the liquid.”); *SIPCO, LLC v. Amazon.com, Inc.*, No. 2:08-CV-359-JRG, 2012 WL 5195942, at *55 (E.D. Tex. Oct. 19, 2012) (citing the “Internet version of The American Heritage Dictionary defining ‘configured’ as ‘designed, arranged, set up, or shaped with a view to specific applications’”).

Omni MedSci also pointed out that other limitations of the '533 Patent claims use the term “capable of,” triggering the presumption that the term “configured to” recited in independent claims 5 and 13 has a different, *i.e.*, narrower, meaning than “capable of.” *Aspex*, 672 F.3d at 1349. Again, Apple ignores this argument and does not dispute it.

Substituting “capable of” for “configured to” would render the “pulse rate” limitation meaningless and irrelevant. But the '533 Patent does not claim mere happenstance. The device must be “configured to”—*i.e.*, designed to—increase SNR in the manner claimed.

C. Apple mischaracterizes the deposition testimony of Omni MedSci’s expert

On page 1, Apple’s attorneys assert, “increase the pulse rate of an LED and that increase will *necessarily* increase SNR as well.” Apple cites no evidence to support that assertion and no evidence exists. But Apple’s obviousness argument hinges on Apple proving that increasing a pulse rate *necessarily* increases SNR because the claims require a light source “configured to” increase SNR.

Apple selectively quotes Omni MedSci’s expert, Dr. MacFarlane, but he repeatedly disagreed when Apple suggested increasing a pulse rate would necessarily increase SNR. (Ex. 1060 at 37:17-22; 38:4-7; 38:19-39:1; 39:12-17; 82:8-83:4.) Dr. MacFarlane acknowledged, in general, that increasing a pulse rate

may increase SNR, but he consistently refuted Apple's suggestion that it necessarily does so. Apple emphasizes Dr. MacFarlane's answer to a contradictory question but omits his explanation about why the question was contradictory. (Reply at 4-5.) Omni MedSci reproduces the original question and answer together with Dr. MacFarlane's explanation of why the question was contradictory:

Q. [by Apple] Will you agree that ***in general***, when you increase the pulse rate of an LED, you will increase the signal-to-noise ratio, ***though that won't always happen?***

THE WITNESS: Yes.

* * *

THE WITNESS: [on redirect] . . . The -- the question was -- was -- was poorly phrased, in my opinion. I mis- -- I misunderstood it. The beginning of it was "***in general***"; the end of it was "***not always***," making the question contradictory -- ***those two pieces are contradictory***, and so I answered erroneously. I'd like to change my answer from a yes to a no.

(Ex. 1060, 37:12-17; 81:4-18).

On re-cross, Dr. MacFarlane elaborated further in response to Apple's questions:

Q. [by Apple] . . . Dr. MacFarlane, when you increase a pulse rate of an LED, in some circumstances, you'll increase the signal-to-noise ratio; is that correct?

THE WITNESS: Increasing the -- increasing the frequency can **sometimes** increase the signal-to-noise ratio.

Q. In general, does increasing the pulse rate of an LED increase the signal-to-noise ratio?

THE WITNESS: I can't -- ***I can't say that in general.***

Q. Why not?

A. There may be instances where that doesn't happen.

* * *

Q. Do you agree that if you increase the pulse rate of an LED, typically, the signal-to-noise ratio will increase?

THE WITNESS: ***I neither agree nor disagree with that.***

Q. Do you agree that if you increase the pulse rate of an LED, sometimes the signal-to-noise ratio will increase?

THE WITNESS: ***Sometimes*** increasing the modulation or the pulse rate of a -- of a -- of an LED can increase the signal-to-noise ratio of -- of the measurement.

(*Id.* at 82:8-85:7, objections to form omitted.) None of this testimony supports Apple's claim that "increase the pulse rate of an LED and that increase will **necessarily** increase SNR as well." (Reply at 1.)

Apple also asserts that Dr. MacFarlane could not name a scenario in which SNR would **not** increase with an increase in pulse rate. (Reply at 5.) Not true. In response to Apple's request for "an example of when increasing the pulse rate of an

LED does not increase the [SNR],” Dr. MacFarlane gave Apple a specific example. (*Id.* at 83:19-84:13.) Apple’s Reply ignores, and does not rebut, the example Dr. MacFarlane provided, and Apple did not ask Dr. MacFarlane to give other examples, which he could have done.

Dr. MacFarlane’s testimony—that increasing pulse rate may or may not increase SNR—highlights the fallacy of Apple’s argument. The claims do not say “perhaps increase SNR”—the light source must be “**configured** to increase [SNR].” Lisogurski, alone or combined with Carlson, does not meet that requirement because, at best, they teach a varying pulse rate that is not “configured to” increase SNR.

D. Lisogurski does not disclose a light source configured to increase SNR by increasing a pulse rate as claimed

The Board correctly determined that the system described in Lisogurski is configured to vary a pulse rate to track a person’s cardiac cycle, not to increase SNR by increasing a pulse rate as claimed. (Paper No. 16, ID at 30-31.) Apple confirms that Lisogurski ties the LED pulse rate to the person’s cardiac cycle:

Lisogurski describes applying cardiac cycle modulation to the pulsing of its LEDs, which means that its device will increase the sampling rate and emitter firing rate to become or remain synchronous with a cardiac cycle. Ex.1011, 25:49-55; 31:11-24, 31:39-55; see Inst. Dec., 30. When Lisogurski’s device applies that modulation technique, depending on

the individual's cardiac cycle, the device will increase its LED pulse rate. Ex.1003, ¶ 96 (“Cardiac cycle modulation schemes would adjust the brightness of a light in a way that is synchronized to the cardiac cycle and similar to or faster than the cardiac pulse rate.”).

(Reply at 10.) And, while this may all be true, merely increasing a pulse rate is not what the ‘533 Patent claims require.

Apple also asserts Lisogurski discloses “increasing the sampling rate” to increase accuracy. (Reply at 11.) But the challenged claims do not recite increasing a “sampling rate” (*i.e.*, the detection rate), they recite increasing a “pulse rate” of the light source. As the Board explained, “when Lisogurski teaches ‘varying light output may also apply to sampling rate,’ Lisogurski is teaching varying the sampling rate to be synchronous with the cardiac cycle, ***not to improve signal-to-noise.***” (Paper No. 16, ID at 31 *citing* Ex. 1011 at 35:5–9.) Thus, Lisogurski, alone, does not disclose the “pulse rate” limitation.

E. Carlson’s teaching does not fill Lisogurski’s gap

1. Carlson teaches the solution to SNR issues is temporary modulation of an unmodulated light source at a predetermined rate

Carlson teaches a pulsoximeter sensor whose “basic idea” is to “use a beam-shaping element . . . to direct the emitted optical radiation” of a “light source” to “increase the optical signal power . . . and thus increasing the Signal/Noise-and signal/Background ratio.” (Ex. 1009 at [0014].) This “basic idea” does not have a

modulated light source, which Carlson introduces later in the specification. (*Id.* at [0018].)

In later embodiments, Carlson proposes “temporarily” modulating the otherwise unmodulated light source:

- “temporarily modulate the amplitude of the optical radiation”;
- “it is further proposed to temporarily modulate the amplitude of the optical radiation of the light source”;
- “[t]he basic idea of using AC-Coupling or Lock-In Amplification detection means is to temporarily modulate the optical radiation”;
- “it is furthermore possible to use a light source modulation to temporarily modulate the optical radiation of the LED”;
- “temporarily modulate the optical radiation of the LED at the carrier frequency f_c in order to shift the power spectrum.”

(Ex. 1009 at [0020], [0027], [0064], [0065].)

An ordinary artisan would understand that Carlson’s solution to an SNR problem is to temporarily modulate the otherwise unmodulated light source at a predetermined frequency. Apple agrees this is Carlson’s teaching:

To handle interference from ambient light when present, Carlson explains that its device “**temporarily** modulate[s] the amplitude of the optical radiation of, e.g., the LED at a carrier frequency f_c in order **to**

shift the power spectrum of the pulsoximeter signals ***into a higher frequency range*** where environmental optical radiation is unlikely.”

(Reply at 14.)⁶

Apple’s attorneys assert, without evidence, this disclosure in Carlson “indicat[es] that the LED previously emitted pulses at a lower frequency—i.e., that Carlson is switching between at least two different frequencies.” (Reply at 14, citing Carlson at [0020].) But Carlson only discloses ***temporary*** modulation, not, as Apple’s attorneys assert, modulation at different (or increasing) rates as claimed. Carlson’s “temporarily modulate” disclosures confirm that the change described in Carlson is from an ***unmodulated*** light source to a temporarily modulated light source at a chosen, unvarying pulse rate—***not*** a pulsing light source configured to increase SNR by increasing its pulse rate as claimed.⁷

⁶ As explained by Dr. MacFarlane, shifting a “power spectrum” is different from increasing a pulse rate. (Ex. 2122, MacFarlane Decl., ¶ 83.)

⁷ Apple’s attorneys also assert Omni’s reading of Carlson “would consume excessive battery power.” (Reply at 15.) They never explain their new assertion and it is incorrect. Carlson’s first two embodiments disclose “at least one light source which can emit light at least at two wavelengths.” (Ex. 1009 at [0012] and [0016].) And Fig. 7c is “a diagram showing power spectrum of physiological signals and ambient

Apple points to dependent claims 10-13 of Carlson reciting a “means” that can “shift the frequency of the emitted light.” (Reply at 15.) Apple never made this argument in its Petition,⁸ and it is incorrect. The claimed “means” must be construed to cover the specific structures and materials disclosed in the specification for performing the claimed function and equivalents. *See* 35 U.S.C. § 112(f). The only frequency shifting Carlson teaches is the introduction of a carrier frequency to shift the frequency of the “power spectrum” of the unmodulated light—not increasing the

light ***without . . . modulation of the light source*** of a sensor.” (*Id.* at [0044].)

Carlson follows these two embodiments with several “alternative” configurations in which the light source is “temporarily modulate[d].” (Ex. 1009 at [0018-20] and [0027].) Carlson thus discloses unmodulated light (*i.e.*, not the “temporarily modulated” light) in the first two embodiments. This refutes Apple’s new—and unsupported—“battery power” argument.

⁸ It is improper for Apple to introduce new arguments in its Reply that it did not make in its Petition. *See* 35 U.S.C. § 312(a)(3); Consolidated Trial Practice Guide (Nov. 2019) at 73 (“Petitioner may not submit new evidence or argument in reply that it could have presented earlier, *e.g.* to make out a prima facie case of unpatentability.”); *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-00582, Paper No. 34 at 30-31 (PTAB Aug. 5, 2019) (Informative).

“pulse rate” as claimed. (Ex. 1009 at [0020] and [0027].) As explained by Dr. MacFarlane, the claimed pulse rate and Carlson’s power spectrum are different concepts. (Ex. 2122, MacFarlane Decl., ¶ 83.)

Finally, Apple argues that switching among different frequencies is “common sense.” (Reply at 15-16.) Because Apple presented no “common sense” argument in its Petition, and because Apple’s expert does not support the new “common sense” theory, the Board should not give any weight to Apple’s new “common sense” argument. *Hulu*, IPR2018-00582, Paper No. 34 at 30-31. In addition, Carlson proceeds contrary to Apple’s purported “common sense.” Carlson uses an approach in which a modulation frequency “is chosen in such a way that it is outside the frequency spectrum of sunlight and of ambient light which, according to FIG. 7b, is in the range of above approximately 1000 Hz.” (Ex. 1009, Carlson at [0069].) Carlson thus solves the varying interference problem by choosing a **single** frequency above **all** expected interference, *i.e.*, above approximately 1000 Hz. (*Id.*) Relying on mere attorney argument, Apple supplies no **evidence** an ordinary skilled artisan would have rejected these teachings of Carlson. Apple’s lack of evidence means that Apple has not met its burden of proof. 35 U.S.C. § 316(e).

2. Carlson adds nothing to what Lisogurski teaches, so the combination cannot render the challenged claims obvious

Apple relies on its misinterpretation of Carlson to assert, incorrectly, “The salient point is that Carlson teaches that when ambient light is present, SNR can be increased by increasing a pulse rate of an LED to a frequency range that mitigates ambient noise,” *i.e.*, “in the range of above approximately 1000 Hz.” (Reply at 19-20.) Apple is wrong for two reasons.

First, Carlson has no teaching of “increasing a pulse rate” for the reasons discussed in the preceding subsection. *Second*, using “a frequency range [such as 1000 Hz] that mitigates ambient noise” is not new information.

Lisogurski teaches a way “to remove ambient and background signals” by measuring ambient light while the LED is off and subtracting it from the signals received with the light on. (*Id.* at 6:7-19.) Lisogurski says off/on measurement can be done at an exemplary modulation rate of 1000 Hz (“1 kHz.”) (*Id.* at 6:30.) Specifically, Lisogurski discloses:

In some embodiments, a technique to remove ambient and background signals may be used in addition to or in place of a power saving light modulation scheme. In a drive cycle modulation technique, the system may cycle light output at a rate significantly greater than the cardiac cycle. For example, a drive cycle modulation cycle may include the system turning on a first light source, followed by a “dark” period, followed by a second light source, followed by a “dark” period. The

system may measure the ambient light detected by the detector during the “dark” period and then subtract this ambient contribution from the signals received during the first and second “on” periods. . . . The cardiac cycle modulation may represent a lower frequency envelope function on the higher frequency drive cycle. For example, cardiac cycle modulation may be an envelope on the order of 1 Hz superimposed on **a 1 kHz sine wave drive cycle modulation**.

(*Id.*, 6:7-30.)⁹

Thus, as relevant here, Carlson teaches nothing that Lisogurski does not already know, namely ambient/background signals can be a problem and 1000 Hz is a useful frequency. Lisogurski solved his noise problem using off/on subtraction at 1000 Hz. Carlson solved his noise problem by temporarily modulating the LED above 1000 Hz. But the references do not teach or even suggest **increasing** the exemplary the 1000 Hz rate for any reason, let alone **for the purpose of increasing SNR** as the claims require. The record is devoid of any evidence that would render the claimed “pulse rate” limitation obvious.

Moreover, no motivation exists to configure a light source to increase SNR by increasing a pulse rate. “The mere fact that the prior art could be so modified

⁹ Apple ignores this portion of Lisogurski and does not rely on it to show obviousness of the “pulse rate” limitation.

would not have made the modification obvious unless the prior art suggested the desirability of the modification.” *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). Apple identifies no proper motivation. Instead, using the ‘533 Patent as a roadmap, Apple improperly conjures motivation using hindsight reasoning. *See TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019) (discussing the “risks [of] allowing the challenger to use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from the prior art—i.e., the impermissible *ex post* reasoning and hindsight bias that *KSR* warned against.”); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004) (“This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result—often the very definition of invention.”) Apple has failed to make a *prima facie* case of obviousness.

F. Omni MedSci’s so-called “procedural arguments” are valid

Apple attacks what it calls Omni MedSci’s “unfounded procedural arguments.” (Reply at 22.) Apple first asserts that Omni MedSci argued that Apple was trying to “bodily incorporat[e]” a “feature of Carlson into Lisogurski’s device.” (*Id.*) On the contrary, Omni MedSci did not assert Apple was trying to bodily incorporate one reference into another. Neither reference teaches nor renders

obvious the claimed “pulse rate” limitation because they are not configured to increase SNR by increasing a pulse rate.

Next, Apple contends Omni MedSci was wrong about Apple’s prima facie obviousness case, focusing on Omni MedSci’s purported argument that “neither Carlson nor Lisogurski alone” render the claims obvious. (Reply at 23.) Omni MedSci did not merely assert that the references “alone” fail to disclose the “pulse rate” limitation. Omni MedSci’s Response went beyond that statement, as does this Sur-reply, detailing why the references *in combination* do not make the challenged claims prima facie obvious. (Resp. at 21-23.)

Apple’s third argument is that the Board may consider an argument that neither Apple nor its expert made in the Petition. (Reply at 23-24.) Apple is wrong. The statute, caselaw, and at least one Board decision confirm that the Board cannot find claims unpatentable using arguments not made and evidence not filed with the Petition. 35 U.S.C. § 312(a)(3) (2011) (“A Petition filed under Section 311 may be considered **only if** . . . [it] identifies . . . with particularity . . . the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge.”); *SAS Institute Inc. v. Iancu*, 138 S.Ct. 1348, 1353 (2018) (“the petition must identify ‘each claim challenged,’ the grounds for the challenge, and the evidence supporting the challenge.”); *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost

importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’”); *Hulu*, IPR2018-00582, Paper No. 34 at 30-31 (holding “Petitioner’s new rationale” was “an improper reply argument” because the rationale was “not based on a previous position Petitioner put forth in the Petition; rather, Petitioner posits a rationale about an ordinarily skilled artisan’s perspective where none existed previously.”).

Last, Apple asserts the Board properly adopted an argument Omni MedSci said Apple did not make in its Petition. (Reply at 24-25.) Omni MedSci’s Response details why the Board improperly adopted that argument. (Resp. at 27-32.) Apple does not refute that detailed analysis, it merely makes the conclusory statement, “the Board did not advance a new argument in its Institution Decision.” (Reply at 25.) Omni MedSci’s analysis stands unrebutted.

G. Conclusion

For the above reasons, and the reasons stated in the Response, Apple has failed to meet its preponderance-of-the-evidence burden to show that Lisogurski and Carlson render the challenged claims obvious. The Patent Owner therefore asks the Board to confirm the patentability of all challenged claims of the '533 Patent.

Respectfully submitted,

Dated: June 11, 2020

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Certificate of Service

The undersigned hereby certifies that on June 11, 2020, a complete and entire copy of **PATENT OWNER'S SUR-REPLY TO PETITION FOR *INTER PARTES* REVIEW UNDER 37 C.F.R. § 42.220**, were served via electronic mail by serving the correspondence email address of IPRnotices@sidley.com, which delivers to the following lead and back-up counsel:

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Dated: June 11, 2020

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